

10/581327

1AP20 Rec'd PCT/PTO 01 JUN 2006

Docket No.: 5259-000065/US/NP  
(PATENT)

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent Application of:  
Hiroji MASUDA et al.

Application No.: National Phase of  
PCT/JP2005/011135

Confirmation No.: N/A

Filed: Concurrently Herewith

Art Unit: N/A

For: INLINE REPEATER AND OPTICAL FIBER  
COMMUNICATION SYSTEM

Examiner: Not Yet Assigned

**INFORMATION DISCLOSURE STATEMENT (IDS)**

MS PCT  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

Pursuant to 37 CFR 1.56, 1.97 and 1.98, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached PTO/SB/08. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

This Information Disclosure Statement accompanies the new patent application submitted herewith.

Applicant has not submitted copies of each cited U.S. patent and U.S. patent application as required by 37 CFR 1.98(a)(2)(i), amended October 2004, as the U.S. Patent and Trademark Office has waived this requirement for all U.S. patent applications. Applicant submits herewith copies of foreign and non-patents in accordance with 37 CFR 1.98(a)(2).

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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /H.W./

Application No.: National Phase of PCT/JP2005/011135 Docket No.: 5259-000065/US/NP

A summary/abstract translation of any non-English language references is enclosed.

1AP200501PCT/JP01 JUN 2006

A concise explanation of relevance of the items listed on form PTO/SB/08 is (1) given for each listed item and (2) in the form of an English language copy of a Search Report from a foreign patent office, issued in a counterpart application, which refers to the relevant portions of the references.

The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 08-0750, under Order No. 5259-000065/US/NP.

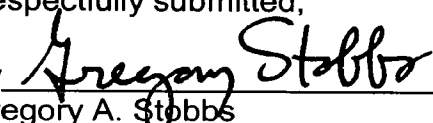
Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 08-0750, under Order No. 5259-000065/US/NP from which the undersigned is authorized to draw.

Dated: June 1, 2006

GAS/dl

Respectfully submitted,

By



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Substitute for form 1449A/B/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(Use as many sheets as necessary)</i>				<b>Complete if Known</b>	
				Application Number	Not Yet Assigned 52591327
				Filing Date	Concurrently Herewith
				First Named Inventor	Hiroji Masuda
				Art Unit	N/A
				Examiner Name	Not Yet Assigned
Sheet	1	of	2	Attorney Docket Number	5259-000065/US/NP

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number Number-Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	AA*	US-2001/0036347-A1	11-02-2001	Hansen et al.	
	AB*	US-6,882,466-B1	04-19-2005	S. Naomasa et al.	
	AC*	US-2002/0018456-A1	02-14-2002	Kakemizu et al.	

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>5</sup> (if known)				
/H.W./	BA	JP-2001-27770 A	01-30-2001			
/H.W./	BB	EP-1059747 A1	12-13-2000			
/H.W./	BC	FR-2796783 A	01-26-2001			
/H.W./	BD	AU-3796300 A	12-14-2000			
/H.W./	BE	CN-1279549 A	01-10-2001			
/H.W./	BF	CA-2309789 A1	12-10-2000			
/H.W./	BG	JP-2001-343673 A	12-14-2001			
/H.W./	BH	EP-1130825 A1	09-05-2001			
/H.W./	BI	CA-2335891 A1	09-03-2001			
/H.W./	BJ	JP-2001-102666 A	04-13-2001			
/H.W./	BK	EP-1091509 A1	04-11-2001			
/H.W./	BL	JP-2003-57692 A	02-26-2003			
/H.W./	BM	EP-1265381 A1	12-11-2002			
/H.W./	BN	JP-2002-280652 A	09-27-2002			

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. \* CITE NO.: Those application(s) which are marked with an asterisk (\*) next to the Cite No. are not supplied (under 37 CFR 1.98(a)(2)(iii)) because that application was filed after June 30, 2003 or is available in the IFW. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

NON PATENT LITERATURE DOCUMENTS				
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.		
/H.W./	CA	H. Masuda et. al., "Optical SNR enhanced amplification in long-distance recirculating-loop WDM transmission experiment using 1580 nm band hybrid amplifier", Electronics Letter, Vol. 35, No. 5, March 4, 1999		
/H.W./	CB	N. Takachio et. al., "32 x 10 Gb/s distributed Raman amplification transmission with 50-GHz channel spacing in the zero-dispersion region over 640 km of 1.55µm dispersion-shifted fiber", NTT Network Innovation Laboratories, OFC 2000		
/H.W./	CC	M.D. Mermelstein et. al., "RIN transfer analysis in pump depletion regime for Raman fibre amplifiers", Electronics Letters, Vol. 38, No. 9, April 25th, 2002		
/H.W./	CD	K. Inoue, "Four-Wave Mixing in an Optical Fiber in the Zero-Dispersion Wavelength Region", Journal of Lightwave Technology, Vol. 10, No. 11, November, 1992		
/H.W./	CE	R. P. Espindola et. al., "Penalty-free 10 Gbit/s single-channel co-pumped distributed Raman amplification using low RIN 14xx nm DFB pump", Electronics Letters, Vol. 38, No. 3, January 31, 2002		
Examiner Signature	/Hibret Woldekidan/			Date Considered 01/06/2010

Substitute for form 1449A/B/PTO			<b>Complete if Known<sup>1</sup></b> <b>5259-000065/US/NP</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(Use as many sheets as necessary)</i>			Application Number	Not Yet Assigned
			Filing Date	Concurrently Herewith
			First Named Inventor	Hiroji Masuda
			Art Unit	N/A
			Examiner Name	Not Yet Assigned
			Attorney Docket Number	5259-000065/US/NP
Sheet	2	of	2	

NON PATENT LITERATURE DOCUMENTS (contd.)			
/H.W./	CF	Y. Ohki et. al., "Increase of Relative Intensity Noise after Fiber Transmission in Co-propagating Raman Pump Lasers", Optical Society of America, Optical Amplifiers and their Applications Topical Meeting, Postdeadline Papers, Vancouver, Canada, July 14-17, 2002	
/H.W./	CG	R.H. Stolen, "Nonlinearity in Fiber Transmission", Proceedings of the IEEE, Vol. 68, No. 10, October, 1980	
/H.W./	CH	H. Masuda et. al., "Wideband, gain-flattened, erbium-doped fibre amplifiers with 3dB bandwidths of $\geq 50$ nm", Electronics Letter, Vol. 33, No. 12, June 5, 1997	
/H.W./	CI	H. Masuda et. al., "1.28 Tbit/s (32 x 43 Gbit/s) field trial over 528 km (6 x 88 km) DSF using L-band remotely-pumped EDF/distributed Raman hybrid inline amplifiers", Electronics Letters, Vol. 39, No. 23, November 13, 2003	
/H.W./	CJ	H. Masuda et. al., "Gain Monitoring of Erbium-Doped Fiber Amplifiers by Detecting Spontaneous Emission", IEEE Photonics Technology Letters, Vol. 5, No. 9, September, 1993	
/H.W./	CK	H. Masuda et. al., "Pump-wavelength detuning method for forward pumped distributed Raman amplification systems", Electronics Letters, Vol. 41, No. 10, May 12, 2005	
/H.W./	CL	H. Masuda et. al., "Field trial using remotely-pumped EDF/DRA hybrid inline repeater system with 1.28 Tbit/s (32 x 43 Gbit/s) over 528 km (6 x 88 km) DSF in the L-band", The Institute of Electronics, Information and Communication Engineers Technical Report, Vol. 104, No. 25, April 16, 2004	

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>Applicant is to place a check mark here if English language Translation is attached.

Examiner Signature	/Hibret Woldekidan/	Date Considered	01/06/2010
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